REMARKS

This patent application presently includes claims 1-24, all of which stand rejected. The claims are amended to address objections made by the examiner and to define the invention more clearly. All rejections are respectfully traversed.

Claim 3 was objected to owing to the presence of the recitation "the other authenticating key previously stored in said virtual memory device" at lines 13-14. The examiner asserted that there was no antecedent basis for "the other authenticating key." This recitation has been corrected by changing "the other" to "another."

Claims 6 was amended at line 3 by inserting "a" before "key tree", as suggested by the examiner.

Claim 11 was objected to owing to the recitation "said memory device" at line 11. The examiner asserted that there was no antecedent basis for this recitation. In response, the recitation has been amended to read "a memory device."

Claim 20 was objected to owing to the recitation "the virtual memory is", at line 5. This has now been corrected to read "the virtual memory device is."

With these amendments, it is believed that all informalities in the claims have now been corrected, and all objections thereto should be withdrawn.

Claims 1, 2, 8, 9, 12-14, 20, 21 and 24 were rejected as obvious over Harada U.S. Patent No. 6,850,914 in view of Fujii et al. U.S. Patent No. 6,128, 263. This rejection is respectfully traversed. Neither reference, nor the combination thereof renders these claims obvious.

These claims relate to a data processing apparatus, a data processing method, a program providing medium, a method for use in a device for recording data, and a computer-readable medium for storing computer-executable software code. In each case, an environment is involved in which a processing apparatus interacts with a memory device to which data is to be recorded or from which data is to be extracted, and mutual authentication is necessary between the processing apparatus and the memory device. The memory device may or may not have the ability to execute such a mutual authentication. When it does not, the processing apparatus provides a proxy for the memory device, a virtual memory device, and does the entire authentication process.

In making these rejections, the examiner admits that Harada:

> [D]oes not disclose the use of a virtual memory device within the data processing apparatus that is used to authenticate with the data processing apparatus when the memory device cannot function to execute the mutual authentication. (Office Action, page 4).

However, he also notes that Fujii:

> [D]iscloses a virtual memory device and a structure executing a mutual authentication with the virtual memory device when the memory device cannot function to execute the mutual authentication (column 15, lines 39-48). (Office Action, page 4).

He then concludes that it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to incorporate the external storage device of Fujii into the recording system of Harada in order to allow for increased security when the memory devices is a read-only memory.

However, it is believed that the examiner is reading more into Fujii than is disclosed. The portion of the patent cited by the examiner, discusses a mutual authentication as follows:

> While the CPU 320 also performs mutual authentication processes for the loaded disk 301, this function is not directly related to the subject matter of the present invention and *no explanation for it will be given.* (Column 15, lines 45-48, emphasis added).

No other discussion of usual authentication has been found in the patent. Accordingly, although Fujii recognizes the need for mutual authentication, it does not, by admission, explain how it is to be done. It certainly does not even remotely suggest the use of a proxy for the disk 301.

Every one of these claims includes such a proxy or virtual memory device. Accordingly, the combination of references made by the examiner could not result in a proper obviousness rejection. The examiner has not made out a *prima facie* case of obviousness, and these rejections should be withdrawn and the claims should be allowed.

Claims 3-7, 10, 15-19, and 22 were rejected as obvious over Harada in view of Fujii and further in view of Dondeti U.S. Patent No. 6,240,188. This rejection is respectfully traversed. None of these references, nor the combination thereof, renders these claims obvious.

Dondeti was cited by the examiner for the asserted disclosure of a previously enciphered key for authenticating distribution of an enabling block. Dondeti discloses nothing about the basic proxy feature of a processing apparatus disclosed above. Accordingly, combining Dondeti with Harada and Fujii would still not render any of Claims 1, 2, 8, 9, 12-14, 20, 21, or 24 unpatentable. Claims 3-7, 10, 15-19 and 22 are dependent from one of the foregoing Claims and are allowable based upon their dependence from an allowable Claim. These Claims are also believed to be allowable on their own merits as incorporating the treed key structure discussed further below with respect to claim 11.

It is noted that the examiner has not made a specific rejection including claims 11 and 23. However, discussion of claim 11 and 23 is present in paragraph 4 of the office action, although they are not included in that rejection. These claims have been amended to incorporate the virtual memory feature discussed above with respect to claims 1, 2, 8, 9, 12-14, 20, 21, and 24. These claims are therefore believed to be allowable for the same reasons. However, there is an additional ground for allowability of these claims, as discussed further below with respect to claim 11.

Claim 11 is representative of an additional feature which renders it patentable. The Claim provides for a set of enciphering keys provided in a hierarchical tree structure corresponding to a grouping of individual devices. The leaves of the tree correspond to the devices and the nodes to various groupings. Each device has a lowest rank key associated and each node has a higher rank key associated with the corresponding grouping. During secure operations, upper-rank keys are enciphered via lower-rank keys. This is disclosed in the application in figures 3 and 4 and the accompanying description at pages 15-17. It is particularly advantageous for securely updating keys. The examiner has cited no prior art teaching or suggesting the organization of encryption keys in a hierarchical tree structure related to groupings of devices where lower-rank keys are used to encipher upper-rank keys. Accordingly, Claim 11 is further believed to be allowable over all the references of record or any combination thereof.

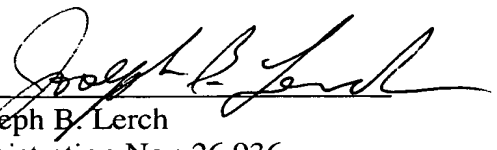
As it is believed that all of the objections and rejections set forth in the Official Action have been fully overcome, favorable reconsideration and allowance are earnestly solicited.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he/she telephone applicant's attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

Dated: December 20, 2005

Respectfully submitted,

By 

Joseph B. Lerch
Registration No.: 26,936
LERNER, DAVID, LITTENBERG,
KRUMHOLZ & MENTLIK, LLP
600 South Avenue West
Westfield, New Jersey 07090
(908) 654-5000
Attorney for Applicant

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